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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,567	04/02/2002	Shigeru Kamegaya	040356-0439	4492
22428	7590	12/06/2005	EXAMINER	
FOLEY AND LARDNER LLP			CREPEAU, JONATHAN	
SUITE 500			ART UNIT	
3000 K STREET NW			PAPER NUMBER	
WASHINGTON, DC 20007			1746	

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/089,567

Applicant(s)

KAMEGAYA ET AL.

Examiner

Jonathan S. Crepeau

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7,9,10,16 and 20 is/are rejected.
- 7) ☒ Claim(s) 8,11-15 and 17-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 29, 2005 has been entered.

This Office action addresses claims 1-20. Claims 8, 11-15 and 17-19 remain objected to as containing allowable subject matter. Although claim 1 has been amended, claims 1-7, 9, 10, 16, and 20 remain rejected over the JP '104 reference. This action is non-final.

### ***Claim Rejections - 35 USC § 102***

2. Claims 1-7, 9, 10, 16, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 2000-063104. The reference is directed to a fuel cell system comprising a reformer (36) and a gas supply device (26) provided upstream of the reformer (see abstract; Fig. 1). The gas supply device generates a high temperature gas for supplying to the reformer upon startup of the fuel cell (see abstract). Regarding claims 2 and 9, the device comprises a first fuel supply mechanism (48) for supplying fuel, which is subsequently burned in a combustion chamber (46). A second

fuel supply mechanism (42) downstream of the first supplies further fuel (see par. [0021] of the machine translation). Regarding claims 3 and 9, a first air supply mechanism (60b) is located downstream of the first fuel supply mechanism (see pars. [0035], [0023]). Regarding claim 4, the temperature of the combustion gas can be adjusted by adjusting the amounts of fuel and air supplied (see par. [0035]). Regarding claim 6, a vaporizer (24) vaporizes fuel to be supplied to the gas supplying device (see par. [0019]). Regarding claim 5 and the second clause of claim 6, these are process limitations that are not considered to distinguished the claimed apparatus over the reference (see MPEP §2114). Regarding claim 7, air is supplied downstream of the second fuel supply (42) mechanism at 60b. Regarding claim 9, the air is mixed with combusted gas at a mixing part (66). Regarding claim 10, the second fuel supply mechanism is supplied on the side face of the mixing part (see Fig. 1). Regarding claim 16, a CO removal device (28) is positioned downstream of the reformer. Regarding claim 20, a combustor (24) is positioned downstream of the fuel cell anode and cathode exhaust.

Regarding claim 1, which now recites a method of operating a drive system for a fuel cell, the claim recites the steps of generating a high-temperature gas containing a fuel component, and supplying this gas to the reformer when the system starts up. In paragraphs [0036] and [0037], the reference teaches the step of stopping combustion when the temperature in the combustion chamber reaches a predetermined level. Subsequently, the methanol amount through injector 48 is increased, and the methanol, oxygen, and remaining combustion gas product water (steam) are reacted in the reforming region. The methanol from injector 48 is supplied to the reformer until the evaporator reaches a predetermined temperature (see [0038]),

thereby signaling the end of startup and the beginning of steady-state operation. Therefore, if the remaining combustion product water of the reference is taken to be the claimed “high temperature gas” and the methanol is taken to be the claimed “fuel component,” the claimed step of “supplying the high temperature gas containing the fuel component for the reforming reaction when the system starts up” is met by the reference in the time immediately after combustion is stopped. This, claim 1 is still anticipated by the reference.

### *Response to Arguments*

3. Applicant’s arguments filed September 29, 2005 have been fully considered but they are not persuasive. Applicant asserts that the claimed method is different than that of Okada (JP ‘104). However, a particular part of the Okada method is believed to anticipate the claimed method, and as such, a rejection under 35 USC 102 is believed to be proper as set forth above. Applicant is further advised that should claim 1 eventually be found to be allowable, dependent claims 2-7, 9, 10, 16, and 20 would still be subject to a rejection under 35 USC 102. This is predicated on the fact that claims 2-7, 9, 10, 16, and 20 still define apparatuses, and such apparatuses would still be capable of carrying out the method of claim 1. In other words, when considering the patentability of the dependent claims, claim 1 would be considered insofar as to the structural limitations it recites. See also MPEP 2114.

Art Unit: 1746

*Conclusion*

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299.

The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr, can be reached at (571) 272-1414. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jonathan Crepeau  
Primary Examiner  
Art Unit 1746  
December 1, 2005